



# TU-722

**Core: TU-722****Prepreg: TU-72P**

TU-722/TU-72P laminate/ prepreg offer enhanced thermal resistance and also provide UV-block characteristic and compatibility with AOI process. These products are suitable for boards that need to survive severe thermal cycles, or to experience excessive assembly work. The lower Z-axis thermal expansion also minimizes the problems, such as lifted pads and barrel cracks. TU-722 laminates also exhibit superior chemical resistance, thermal stability for lead free soldering assembly and with general CAF resistance property.

## Applications

- Office Routers
- Server, workstation

## Performance and Processing Advantages

- Lead free process compatible
- Anti-CAF capability
- Superior dimensional stability, thickness uniformity and flatness
- Good drilling processability
- Excellent through-hole and soldering reliability
- High interlayer bonding strength with optimum resin flow
- Superior dielectric thickness control
- Wide processing window for maximum lamination performance
- Excellent thermal and chemical resistance
- Compatible with AOI process with UV-block property
- Higher Tg characteristics
- Reduced Z-axis thermal expansion

## Industry Approvals

- IPC-4101 Type Designation : /21, /24, /26, /28, /121, /124
- UL Designation – ANSI Grade: FR-4.0
- UL File Number: E189572
- Flammability Rating: 94V-0
- Maximum Operating Temperature: 130°C

## Standard Availability

- Thickness: 0.002" [0.05mm] to 0.062" [1.58mm], available in sheet or panel form
- Copper Foil Cladding: 1/3 to 5 oz (HTE) for built-up; 1/8 to 12 oz (HTE) for double sides and H to 2 oz (MLS)
- Prepregs: Available in roll or panel form
- Glass Styles: 106, 1080, 2113, 2116, 1506 and 7628, etc.





Typical Properties for TU-722 Laminate			
	Typical Values	Test Condition	SPEC
<b>Thermal</b>			
Tg (DMA) Tg (DSC) Tg (TMA) Td (TGA)	185 °C 175 °C 165 °C 330 °C	E-2/105+des	N/A
CTE x-axis CTE y-axis CTE z-axis	12~16 ppm/°C 12~16 ppm/°C 3.5 %	Ambient to Tg Ambient to Tg 50 to 260°C	N/A N/A < 3.5%
Thermal Stress, Solder Float, 288°C	> 60 sec	A	> 10 sec
T-260 T-288	> 30 min > 5 min	E-2/105+des	> 30 min > 5 min
Flammability	94V-0	E-24/125+des	94V-0
<b>Electrical</b>			
Permittivity (RC50%) 1MHz (LCR meter) 1GHz (SPC method/HP4291B)	4.5 4.3/4.2	C-24/23/50	< 5.4 N/A
Loss Tangent (RC50%) 1MHz (LCR meter) 1GHz (SPC method/HP4291B)	0.016 0.017/0.016	C-24/23/50	< 0.035 N/A
Volume Resistivity	> 10 <sup>10</sup> MΩ·cm	C-96/35/90	> 10 <sup>6</sup> MΩ·cm
Surface Resistivity	> 10 <sup>8</sup> MΩ	C-96/35/90	> 10 <sup>4</sup> MΩ
Electric Strength	> 40 KV/mm	-	> 30 KV/mm
Dielectric Breakdown	> 50 KV	-	> 40 KV
<b>Mechanical</b>			
Young's Modulus Warp Direction Fill Direction	25 GPa 22 GPa	A	N/A
Flexural Strength Lengthwise Crosswise	> 70,000 psi > 55,000 psi	A A	> 60,000 psi > 50,000 psi
Peel Strength, 1.0 oz. Cu foil	8~11 lb/in	A	> 4 lb/in
Water Absorption	0.18 %	E-1/105+des+D-24/23	< 0.8 %

## NOTE:

- Property values are for information purposes only and not intended for specification.
- Any sales of these products will be governed by the terms and conditions of the agreement under which they are sold.

